

26. Allow Nielsen to Move AMOL for Syndicated Programs to Line 23 of the Active Video on a Trial Basis. At the meeting among representatives of Nielsen, Airtrax, and the Chief of the Mass Media Bureau held in the offices of the Commission on September 7, 1989 under the auspices of the Mass Media Bureau Chief (the "September 7 Meeting"), the discussion included the feasibility of allowing Nielsen to place its AMOL codes for syndicated television programs on Line 23 of the active portion of the television broadcast video signal, on a temporary basis.

27. It is Airtrax's understanding from the September 7 Meeting that Nielsen's representatives did not reject the concept of a special temporary authorization ("STA") to Nielsen in order to permit AMOL encoding of syndicated television programs on Line 23, although certain concerns were expressed that the design of Nielsen's decoders is now over ten years old, with the result that the decoders could possibly be at the limit of their capacity to monitor Line 23.

28. Airtrax is aware that some television broadcasting station interests may object to Nielsen's use of Line 23, even on an STA basis, on the grounds that such use might degrade the quality of the television picture. Airtrax submits that there is no basis in engineering fact or science

for an objection to the effect that properly-encoded signals on Lines 22 and/or 23 would result in visible degradation to the quality of the television picture. In any event, one of the purposes of the STA would be to confirm that proposition, and the STA could be conditioned so that no degradation would be allowed to occur.

29. Airtrax is also aware of the Commission's staff's concern that the allocation of a second line of active video might encourage other parties to come forward with proposals for the use of additional lines, with no rules or guidelines to circumscribe such uses. To address that concern, assuming successful completion of the trials of Nielsen's AMOL encoding of syndicated programs on Line 23, the Commission could promptly thereafter institute formal rule making proceedings for the purpose of reserving (i) Line 22 for commercial advertisement identification and verification services, such as those offered by Airtrax and VidCode; (ii) Line 23 for program and lineup verification services, such as that offered by AMOL; (iii) Line 24 for interactive video, or reserved for unspecified future purposes, upon appropriate application and an adequate supportive showing; (iv) Line 25 to remain blank, as a "dividing line;" and (v) Lines 26 and below for television picture information only.

30. The reservation of lines of the television signal by category of use is, of course, fully supported by Commission precedent. *See, e.g.*, Section 73.682(a)(22) of the Commission's Rules and Regulations, 47 C.F.R. Section 73.682(a)(22) (1988), which reserves portions of Line 21 for "closed-captioning" services for the hearing-impaired (*i.e.*, ". . . a program related data signal which, when decoded, provides a visual depiction of information simultaneously being presented on the aural channel").

31. "Interval Coding" on Line 22. Discussions were held at the September 7 Meeting concerning the practicality of allowing Nielsen to place its AMOL codes for syndicated television programs on Line 22 on an STA basis, with the condition that post-production/duplication houses must refrain from inserting AMOL codes into those portions of the program tape that represent commercial advertisements and other forms of promotional announcements at the beginning, at the end, and during the course of the program. The intention of this so-called "interval-coding" procedure would be that the post-production/duplication houses, in laying down the AMOL codes on Line 22 along the length of the tape of the syndicated program, would avoid "overwriting" Airtrax's and VidCode's Line 22 codes on commercial advertisements and promotional announcements that had been previously integrated into the master tape.

32. The salient problem with this strategy for accommodating both AMOL and the commercial advertisement identification and verification services on Line 22 is that its success would lie entirely in the hands of third parties, i.e., post-production/duplication houses, whose behavior cannot be controlled by Nielsen, Airtrax, or the Commission. In order for the interval-coding strategy to succeed in allowing Nielsen's AMOL codes and other parties' commercial advertisement identification codes to co-exist on Line 22, the post-production/duplication houses would have to be fully educated, and motivated, to change their current behaviors and, in some cases, their encoding equipment, their facilities, and their layout and operating procedures.

33. The interval-coding strategy assumes a level of technical skill and AMOL-encoding equipment capability that is not currently available in most syndicators' post-production/duplication houses, based upon Airtrax's knowledge of those houses. In order to avoid the overwriting by later-inserted Line 22 AMOL codes of earlier-inserted Line 22 Airtrax or VidCode codes in an adjacent segment of the program tape, the encoding operator and his/her equipment must be capable of observing a separation between the ending video of the former and the beginning video of the latter that is never more than fifteen frames (equivalent to one-half of one second in duration).

34. The post-production/duplication house facilities in which AMOL encoding is accomplished typically consist of a room in which thirty or more tape machines are present, and in which a single operator may be responsible for playing back two or three different master program tapes simultaneously, while making duplicate tapes of each. The input terminal for the insertion of the AMOL codes may be located in a separate room from the room in which the operator is making duplicate tapes from the masters. The process of assembling the master tape, which involves (among other things) insertion of the bartered commercial advertisements and the promotional announcements into the black slugs in the tape, then inserting the AMOL codes, and then producing the duplicate tapes, generally takes place in the post-midnight time period, and is usually accomplished by operators with lower-level skills. Due to time pressures imposed by the program distribution schedule, the post-production/duplication houses not uncommonly have less than an hour or two from the time when a program tape is delivered to them until the integrated and assembled tape's duplicates must be in circulation.

35. A typical half-hour syndicated program tape may have three or four separate commercial advertisement breaks, as well as three or more integrated "promotional-consideration"

commercials and one or two "show commercials" (see footnote 3, above), with the intervening program-content segments of varying lengths. Each advertisement, commercial, or promotional announcement encoded with Airtrax or VidCode codes would require that the AMOL-encoding operator stop and then re-start his or her equipment within one-half of one second's accuracy, in order to avoid the code overwriting phenomenon whose avoidance is the sine qua non of the interval-coding procedure.

36. Under those circumstances, an operator attempting to de-activate and re-activate the AMOL encoder on several different tapes concurrently, involving different programs with differing program-segment lengths and with commercial advertisements and promotional announcements appearing at varying intervals, cannot realistically be expected to devote the kind of intense and particularized attention that would be required in order to accomplish the task of confining the AMOL codes to the level of accuracy demanded (*i.e.*, one-half of one second). Nor does the existing equipment in most post-production/duplication houses allow for such accuracy.

37. It is largely fanciful to project that the post-production/duplication houses would be willing or able to modify their current behaviors and facilities, in order to

accommodate the procedures necessary for the interval-coding strategy to succeed. At a minimum, sufficient time would need to be afforded in order to educate and motivate the post-production/duplication house community, and to enable many of those houses to acquire a greater number of highly-skilled employees and more refined equipment. Even after such a campaign were fully completed, there is no assurance that the interval-coding strategy would work out in the real world. In the event that the strategy were to fail, one or both of the complementary national television program ratings and commercial advertisement identification and verification services would suffer, and the principle of preserving co-existence of the two services would be sacrificed.^{13/}

38. There is irony in the notion that the Commission would entertain the interval-coding strategy at all, inasmuch as the effectiveness of that strategy would depend entirely upon the as-yet-unknown willingness and ability of a universe

^{13/} The analysis in the text omits, for purposes of this discussion, the increased costs that the post-production/duplication houses would have to bear in order to implement the interval-coding strategy, costs that would be passed on to the program syndicators, resulting in higher program production costs, higher advertising charges, and therefore contributing generally to a more costly television advertising environment.

of third parties (*i.e.*, syndicated television program post-production/duplication houses) to modify their behavior and facilities in order to make such interval coding succeed, whereas the origin of this entire controversy is Nielsen's supposed difficulty in causing yet another universe of third parties (*i.e.*, a still-unquantified number of television stations) to modify their behavior and facilities in order to permit AMOL codes to be passed on Line 20.^{14/}

39. Alternate-Field Operation on Line 22. A second strategy for possible co-existence on Line 22 of Nielsen's AMOL codes and the commercial advertisement identification and verification services' codes that was discussed at the September 7 Meeting envisions confining the AMOL codes to Field 1 of Line 22 and confining the Airtrax or VidCode codes to Field 2 of Line 22. That strategy might readily satisfy Nielsen's interests, given that AMOL currently operates only on

^{14/} The irony is heightened by contrasting the financial incentives that disfavor the interval-coding strategy (*see* footnote 13, above) with the financial incentives that would appear to favor universal "passing" by television stations of the AMOL codes on Line 20 in order to expedite the process of obtaining Nielsen's ratings. If Nielsen is to be believed that the stations' behavior cannot be modified, where to do so would appear to accommodate their financial interests, Airtrax is at a loss to understand how the post-production/duplication houses can be expected to modify their behavior, where to do so would contravene their financial interests.

Field 1 of Line 20. On the other hand, implementation of that strategy would require a complete re-design of the Airtrax system, which uses both Fields 1 and 2 of Line 22.

40. Airtrax's concerns with respect to the alternate-field strategy are manifold. In the first instance, there is the risk that an alternate-field strategy, in its implementation, would experience a statistically-significant number of instances of inter-field "slippages," causing both sets of codes to become unusable. Were that to occur, Airtrax (and possibly also VidCode) would have been put to the substantial cost of unilaterally re-designing its or their system(s), only to discover at the end of the process that the effort was unavailing for all parties, including Nielsen. The end result in that circumstance would be that the alternate-field strategy would have rendered useless two or more formerly-successful and complementary encoding systems. No conceivable interest, public or private, would have been advanced thereby.

41. As a second matter of concern, Airtrax's patent pending for its system depends, in significant part, upon the fact that it is a two-field system. Re-design of Airtrax's technology to a one-field system could raise a question of possible infringement of other parties' proprietary rights in single-field systems.

42. Thirdly, Airtrax would require several months or longer in order to re-design its system to confine it to a single field. Were Nielsen's AMOL codes to be allowed to be inserted on Field 1 of Line 22 during that transitional period of time, Airtrax's codes would become unusable, with the result that the alternate-field strategy would have failed to have provided for its original objective of fostering co-existence of the two systems on Line 22. Thus, any consideration of the alternate-field strategy would have to include a substantial "grace" period, during all of which time Airtrax would continue to operate on both fields of Line 22 without having to yield Field 1 of Line 22 to AMOL codes, pending the development of a single-field Airtrax system.

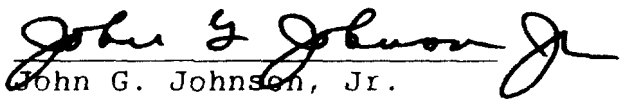
Conclusion

WHEREFORE, the foregoing having been duly considered, Airtrax respectfully urges the Commission to protect the continued availability to the television advertising industry of both AMOL-dependent national television program ratings and commercial advertisement identification and verification services, and to protect the development of new technologies by the commercial advertisement and verification services, by

pursuing the strategies for co-existence of those services with
AMOL as set forth hereinabove.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Lois L. Trader, a secretary in the law firm of Bryan, Cave, McPheeters & McRoberts, do hereby certify that I have on this twenty-second day of September, 1989, caused copies of the foregoing COMMENTS OF AIRTRAX IN RESPONSE TO COMMISSION PUBLIC NOTICE to be sent by first-class United States mail, postage prepaid, to the following:

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